

Long Term Manipulations of Intact Microbial Mat Communities in a Greenhouse Collaboratory: Simulating Earth's Present and Past Field Environments



Long Term Manipulations of Intact Microbial Mat Communities in a Greenhouse Collaboratory: Simulating Earth's Present and Past Field Environments

NASA Technical Reports Server
(NTRS), et al., Brad Bebout

Filesize: 9.45 MB

Reviews

It is simple in study safer to understand. It can be full of knowledge and wisdom Your way of life span is going to be enhance when you full looking at this book.
(Lavina Torp)

LONG TERM MANIPULATIONS OF INTACT MICROBIAL MAT COMMUNITIES IN A GREENHOUSE COLLABORATORY: SIMULATING EARTHS PRESENT AND PAST FIELD ENVIRONMENTS

[DOWNLOAD](#)

Bibliogov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 34 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. Photosynthetic microbial mat communities were obtained from marine hypersaline saltern ponds, maintained in a greenhouse facility, and examined for the effects of salinity variations. Because these microbial mats are considered to be useful analogs of equivalent ancient marine communities, they offer insights about evolutionary events during the greater than 3 billion year time interval wherein mats co-evolved with Earths geosphere and atmosphere. Although photosynthetic mats can be highly dynamic and exhibit extremely high activity, the mats in the present study have been maintained for more than one year with relatively minor changes. The major groups of microorganisms, as assayed using microscopic, genetic, and biomarker methodologies, are essentially the same as those in the original field samples. Field and greenhouse mats were similar with respect to rates of exchange of oxygen and dissolved inorganic carbon across the mat-water interface, both during the day and at night. Field and greenhouse mats exhibited similar rates of efflux of methane and hydrogen. Manipulations of salinity in the water overlying the mats produced changes in the community that strongly resemble those observed in the field. A collaborative testbed and an array of automated features are being developed to support remote scientific experimentation with the assistance of intelligent software agents. This facility will permit teams of investigators to explore ancient environmental conditions that are rare or absent today but might have influenced the early evolution of these photosynthetic ecosystems. This item ships from La Vergne, TN. Paperback.



[Read Long Term Manipulations of Intact Microbial Mat Communities in a Greenhouse Collaboratory: Simulating Earths Present and Past Field Environments Online](#)



[Download PDF Long Term Manipulations of Intact Microbial Mat Communities in a Greenhouse Collaboratory: Simulating Earths Present and Past Field Environments](#)

Relevant Kindle Books



Animalogy: Animal Analogies

Sylvan Dell Publishing. Paperback. Book Condition: New. Cathy Morrison (illustrator). Paperback. 32 pages. Dimensions: 9.8in. x 8.4in. x 0.4in. Compare and contrast different animals through predictable, rhyming analogies. Find the similarities between even the most incompatible...

[Download eBook »](#)



The Whale Tells His Side of the Story Hey God, I've Got Some Guy Named Jonah in My Stomach and I Think I'm Gonna Throw Up

B&H Kids. Hardcover. Book Condition: New. Cory Jones (illustrator). Hardcover. 32 pages. Dimensions: 9.1in. x 7.2in. x 0.3in. Oh sure, well all heard the story of Jonah and the Whale a hundred times. But have we...

[Download eBook »](#)



God Loves You. Chester Blue

Henry and George Press. Paperback. Book Condition: New. Ursula Andrejczuk (illustrator). Paperback. 140 pages. Dimensions: 8.0in. x 5.2in. x 0.3in. BEAUTIFUL NEW ILLUSTRATIONS BRING THE STORY TO LIFE! A charming book about a mysterious bear that shows...

[Download eBook »](#)



Good Night, Zombie Scary Tales

Feiwel & Friends. Paperback. Book Condition: New. Iacopo Bruno (illustrator). Paperback. 112 pages. Dimensions: 8.2in. x 5.4in. x 0.2in. Welcome. Have a seat. Ignore the shambling undead outside. Let us tell you a story. But be...

[Download eBook »](#)



Molly on the Shore, BFMS 1 Study score

Petrucci Library Press. Paperback. Book Condition: New. Paperback. 26 pages. Dimensions: 9.7in. x 6.9in. x 0.3in. Percy Grainger, like his contemporary Bela Bartok, was intensely interested in folk music and became a member of the English...

[Download eBook »](#)



History of the Town of Sutton Massachusetts from 1704 to 1876 (Paperback)

Createspace, United States, 2015. Paperback. Book Condition: New. annotated edition. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.This version of the History of the Town of Sutton Massachusetts

[Save ePUB »](#)



The Pickthorn Chronicles

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 112 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.Pickthorn has selected some great stories as a sequel to his first book,

[Save ePUB »](#)



Tiger Tales DK Readers, Level 3 Reading Alone

DK CHILDREN. Paperback. Book Condition: New. Paperback. 48 pages. Dimensions: 8.7in. x 5.7in. x 0.2in.Hunter or hunted How much longer will these magnificent beasts prowl the plant These stories will touch your heart. The 48-page

[Save ePUB »](#)



By the Fire Volume 1

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 130 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.By the Fire is an exciting new Bi-Monthly publication featuring new works by

[Save ePUB »](#)



A Sea Symphony - Study Score

Petrucci Library Press. Paperback. Book Condition: New. Paperback. 324 pages. Dimensions: 9.6in. x 6.7in. x 0.7in.Vaughan Williams conducted the first performance of his great choral symphony on his 38th birthday, October 12, 1910, at the

[Save ePUB »](#)